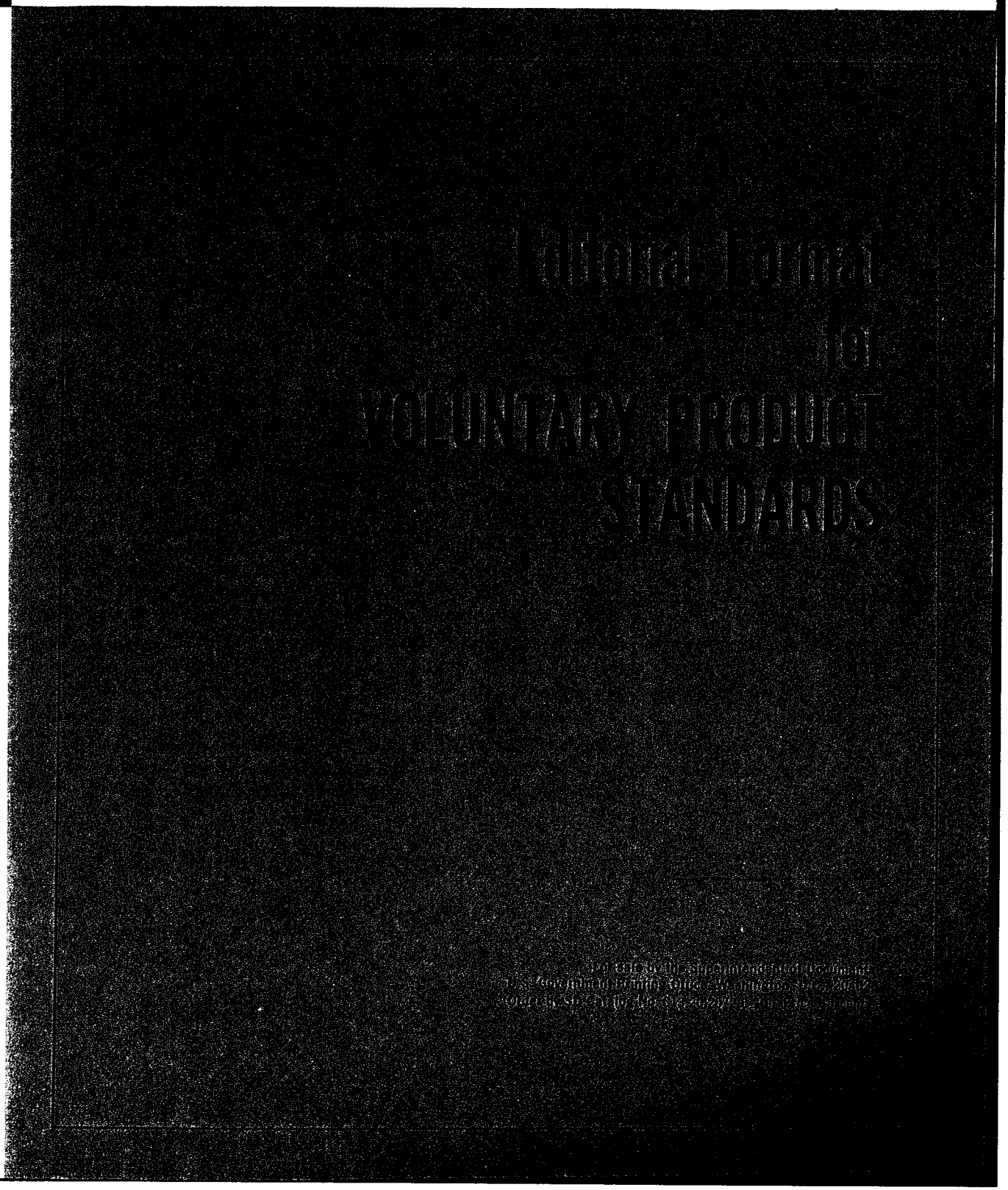
A UNITED STATES DEPARTMENT OF COMMERCE PUBLICATION

NBS Voluntary Product Standard

PS 0-70



U.S. DEPARTMENT OF COMMERCE

National Bureau of Standards

Voluntary Product Standard
(PS 0–70)
Editorial Format for VOLUNTARY PRODUCT STANDARDS

Abstract

This publication is intended to assist individuals, organizations, and agencies which are concerned with the writing of standards. It establishes and describes the material to be contained in a standard and provides specific instructions for writing standards. It is primarily intended for those developing initial drafts of standards to be submitted to the Bureau under the *Procedures for the Development of Voluntary Product Standards* published by the Department of Commerce.

Key words: Editorial Format; Format; Product Standards; Standard; Voluntary Product Standards.

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VOLUNTARY PRODUCT STANDARDS

Voluntary Product Standards are standards developed under procedures established by the Department of Commerce (15 CFR Part 10, as amended, May 28, 1970). The standards may include (1) dimensional requirements for standard sizes and types of various products, (2) technical requirements, and (3) methods of testing, grading, and marking. The objective of a *Voluntary Product Standard* is to establish requirements which are in accordance with the principal demands of the industry and, at the same time, are not contrary to the public interest.

Development of a VOLUNTARY PRODUCT STANDARD

The Office of Engineering Standards Services of the National Bureau of Standards has been assigned by the Department of Commerce the responsibility to work closely with scientific and trade associations and organizations, business firms, testing laboratories, and other appropriate groups to develop *Voluntary Product Standards.* The Bureau has the following role in the development process: It (1) provides editorial assistance in the preparation of the standard; (2) supplies such assistance and review as is required to assure the technical soundness of the standard; (3) acts as an unbiased coordinator in the development of the standard; (4) sees that the standard is representative of the views of producers, distributors, and users or consumers; (5) seeks satisfactory adjustment of valid points of disagreement; (6) determines the compliance with the criteria established in the Department's procedures cited above; and (7) publishes the standard.

Industry customarily (1) initiates and participates in the development of a standard; (2) provides technical counsel on a standard; and (3) promotes the use of, and support for, the standard. (A group interested in developing a *Voluntary Product Standard* may submit a written request to the Office of Engineering Standards Services, National Bureau of Standards, Washington, D.C. 20234.)

A draft of a proposed standard is developed in consultation with interested trade groups. Subsequently, a Standard Review Committee is established to review the proposed standard. The committee, appropriately balanced, includes qualified representatives of producers, distributors, and users or consumers of the product being standardized. When the committee approves a proposal, copies are distributed for industry consideration and acceptance. When the acceptances show general industry agreement and when there is no substantive objection deemed valid by the Bureau, the Bureau announces approval of the *Voluntary Product Standard* and proceeds with its publication.

Use of a VOLUNTARY PRODUCT STANDARD

The adoption and use of a *Voluntary Product Standard* is completely voluntary. *Voluntary Product Standards* have been used most effectively in conjunction with legal documents such as sales contracts, purchase orders, and building codes. When a standard is made part of such a document, compliance with the standard is enforceable by the purchaser or the seller along with other provisions of the document.

Voluntary Product Standards are useful and helpful to purchasers, manufacturers, and distributors. Purchasers may order products that comply with *Voluntary Product Standards* and determine for themselves that their requirements are met. Manufacturers and distributors may refer to the standards in sales catalogs, advertising, invoices, and labels on their product. Commercial inspection and testing programs may also be employed, together with grade labels and certificates assuring compliance, to promote even greater public confidence. Such assurance of compliance promotes better understanding between purchasers and sellers.

Editorial Format for VOLUNTARY PRODUCT STANDARDS

Introduction

The National Bureau of Standards, U. S. Department of Commerce, assists industry groups and public agencies in the development of voluntary standards for various products. These standards are developed in the public interest under specific procedures which ensure participation and provide acceptance opportunities to all interested groups. The revised procedures were published in the May 28, 1970, *Federal Register* (Vol. 35, No. 104), and copies are available from the Office of Engineering Standards Services, National Bureau of Standards, Washington, D.C. 20234.

The format described herein constitutes a general guide for the use of proponent groups in preparing an initial draft of a standard, and by others engaged in *Voluntary Product Standards* work. These editorial requirements should not be regarded as mandatory, but are generally recommended as standard form. Drafts of proposed standards should be submitted to the Office of Engineering Standards Services in accordance with the established procedures.

The editorial format, as described herein, is divided into two parts: The first deals with the basic contents of the *Voluntary Product Standard,* and the second provides detailed instructions for writing *Voluntary Product Standards.*

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Editorial Format for VOLUNTARY PRODUCT STANDARDS

PART I—Contents of a VOLUNTARY PRODUCT STANDARD

1. PURPOSE

The first paragraph of the Standard shall be a brief statement covering the main reasons for establishing the Standard.

2. SCOPE AND CLASSIFICATION

2.1. **Scope**—The scope of the Standard shall be a *clear* and *concise* abstract of its contents.

2.2. **Classification** — Commercial classifications of the product into categories such as *sizes, types, grades,* and *classes* shall be listed under this heading and shall be as further defined in 2.2.1. When more than one size, type, grade, or class is listed, each shall be briefly but specifically defined.

2.2.1. **Classification definitions**—Size, type, class and grade shall be defined as follows:

(a) **Size**—Used to designate the *dimensions* or *capacities* (nominal or actual) of the items covered by the Standard.

(b) **Type**—Used to designate the primary differences in the *design, shape,* or *style* of similar products. Type is generally designated by *Roman numerals,* i.e., type I, type II.

(c) **Class**—Used to designate the differences in *mechanical* or *other characteristics* which do *not* constitute a difference in *quality.* Class is generally designated by Arabic numerals, i.e., class 1, class 2.

(d) **Grade**—Used to designate differences in *quality.* Grade is generally designated by capital letters, and listed in the order of decreasing quality, i.e., grade A, grade B.

(e) **Other**—If the above terms do not accurately classify the differences in the product, terms such as color, form, weight, power supply, or temperature rating may be used.

3. REQUIREMENTS

The first paragraph of section 3 shall read as follows:

Products represented as complying with this Voluntary Product Standard shall meet all of the requirements specified herein.

3.1. **General** — The requirements section shall include, as appropriate, *sizes and dimensions, material specifications, specific properties, performance criteria (including safety requirements)* and *design, construction, quality,* and *workmanship requirements* for all products covered by the Standard. Requirements of a general nature should be stated first, followed by specific requirements. Requirements for individual component parts of a product should be listed separately. Direct cross-referencing to the inspection and test procedures to be used for determining conformance, as described in section 4, shall be made. *The requirements shall be established, whenever possible, in terms of performance criteria rather than material, design, or construction specifications.* The requirements shall be so worded as to provide a definite basis for rejection in cases of nonconformance.

3.2. **Sizes and dimensions**—All sizes shall be specified in terms of customary units. Nominal size designations shall be defined in terms of specific dimensions with tolerances or limits (either minimum or maximum) for each dimension.

3.3. **Material**—The requirements for the material, parts, or components of the product shall be stated in this subsection. When a published specification for the material or a component is applicable, it should be included by reference. (See part II, sec. 3.)

3.4. **Design and construction**—The requirements concerning or relating to design and construction shall be specified under this heading. Detailed design characteristics should be covered in individual paragraphs. Construction requirements should be related to the product's physical limitations and to the stresses which the product is expected to withstand.

3.5. **Specific properties**—The property requirements of the finished product shall be specified under paragraph headings such as *Hardness, Acidity, Toxicity, Resistivity, Dielectric strength,* and *Color.*

3.6. **Performance requirements**—Performance requirements shall be specified under this general heading. These requirements shall specify what is expected of the finished product in terms of specific criteria which shall be listed in individual paragraphs such as *burst*

strength, opening force, colorfastness, and *crush resistance.*

3.7. **Finish**—Finish requirements shall be specified under this heading. These requirements shall cover such properties as smoothness, freedom from excessive oxide scales, and the general appearance of the finished product. Requirements for protective coatings and color of coatings should be listed in this paragraph.

3.8. **Workmanship**—Workmanship and quality requirements shall be listed in the last paragraph of section 3. They shall be worded so as to provide a *clear, reasonable,* and *logical basis* for rejection of the products that do not conform to the requirements.

4. INSPECTION AND TEST PROCEDURES

4.1. **General**—Where applicable, the following statement describing quality control practices shall be used in this paragraph:

> The inspection and test procedures contained in this section are to be used to determine the conformance of products to the requirements of this Voluntary Product Standard. Each producer or distributor who represents his products as conforming to this Standard may utilize statistically based sampling plans which are appropriate for each particular manufacturing process but shall keep such essential records as are necessary to document with a high degree of assurance his claim that all of the requirements of this Standard have been met. Additional sampling and testing of the product, as may be agreed upon between purchaser and seller, is not precluded by this section.

4.2. **Test Procedures**—Test procedures shall be included for the purpose of determining a product's conformance to the requirements stated in section 3 and shall be arranged in the same order as those requirements. Information concerning the size, number, and conditioning of test specimens, the testing conditions, and a description of the material and equipment used in making tests shall be included in this section where appropriate. Descriptions of the methods of testing shall be worded so as to ensure that the tests will be properly performed. When another specification or related document forms a part of this section by reference, the requirements for inspection and testing included in the other specification shall not be repeated in the Standard. Appropriate reference should be included to indicate the sections of the specification which are required by the Standard.

4.3. **Inspection**—Procedures for visual inspection shall be covered under this heading.

4.4. **Third party certification**—Manufacturers may contract with a qualified testing and inspection bureau or agency to carry out the necessary sampling, inspection, testing, and quality control to verify that products conform to the Voluntary Product Standard. This type of program gives assurance to the consumer and distributor that the product has been examined by knowledgeable persons other than the producer, and found to conform to the Standard. *A qualified inspection and testing bureau or agency* is defined as one that (a) has the facilities and trained technical personnel to verify that the grading, measuring, construction, workmanship, and other characteristics of a product, as determined by inspection, sampling, and testing, comply with all applicable requirements specified in a Standard; (b) has developed procedures to be followed by their personnel in the performance of the inspection and testing; (c) has no financial interest in, or is not financially dependent upon any single company manufacturing the product being inspected or tested or any portion thereof; and (d) is not owned, operated, or controlled by any such company.

5. DEFINITIONS

Whenever it is necessary to establish specific meanings or interpretations for terms used within the Standard, they shall be listed in this section. When definitions are used, they shall be clear and concise and shall be referenced within the Standard to prevent confusion or to avoid misinterpretation. Nationally recognized definitions shall be used wherever possible. Reference shall be made to such definitions, if published and available, whenever appropriate, but those definitions which are applicable to the Standard may be listed in this section.

6. IDENTIFICATION

The identification section shall include the following language:

> In order that purchasers may identify products conforming to all requirements of this Voluntary Product Standard, producers and distributors may include a statement of compliance in conjunction with their name and address on product labels, invoices, sales literature, and the like. The following statement is suggested when sufficient space is available.
>
> > This _____ conforms to all of the requirements established in Voluntary Product Standard PS ___-___, developed cooperatively with the industry and published by the National Bureau of Standards under the *Procedures for the Development of Voluntary Product Standards* of the U. S. Department of Commerce. Full responsibility for the conformance of this product to the standard is assumed by (name and address of producer or distributor).
>
> The following abbreviated statement is suggested when available space on labels is insufficient for the full statement:
>
> > Conforms to PS ___-___, (name and address of producers or distributor).

7. EFFECTIVE DATE

This section shall read as follows:

> The effective date of this Voluntary Product Standard is the date upon which reference to the Standard may be made by producers, distributors, users and consumers, and other interested parties. Compliance by producers with all of the requirements of this Voluntary Product Standard may not actually occur until some time after its effective date. Products shall not be represented as conforming to this Voluntary Product Standard until such time as all requirements established in the Standard are met. The effective date of this Standard is _____.

8. HISTORY OF PROJECT

The history of the Voluntary Product Standard will be summarized in this section. It will include such information as the name of the proponent group, the date of the request for the initiation of the project, the pertinent steps and dates in the development procedure, and the effective date of the Standard. For revisions, the history of the initial Standard will be condensed and the history of the revision added.

9. STANDING COMMITTEE

When the Voluntary Product Standard is approved for publication, a Standing Committee will be appointed by the National Bureau of Standards. The committee is responsible for the review and approval of proposals to revise or amend the Standard in light of changing circumstances. The names, addresses, and affiliations of the members of the Standing Committee will be listed directly below the following introductory paragraph:

> The individuals whose names are listed below constitute the membership of the Standing Committee for this Standard. The function of the committee is to review all proposed revisions and amendments in order to keep this Standard up to date. Comments concerning this Standard and suggestions for its revision may be addressed to any member of the committee or to the Office of Engineering Standards Services, National Bureau of Standards, Washington, D.C. 20234, which acts as secretary for the committee.

10. ACCEPTORS

The known acceptors of a Standard prior to its publication, will be alphabetically listed in this section. When appropriate, producers, distributors, users, general interests and government agencies (Federal, State, and local) will be listed separately. The following paragraph will precede the list of acceptors:

> The producers, distributors, users, and others listed below have individually indicated in writing their acceptance of this Voluntary Product Standard prior to its publication. The acceptors have indicated their intention to use this Standard as far as practicable but reserve the right to depart from it when necessary. The list is published to show the extent of recorded public support for this Standard.

APPENDIX

Supporting material, such as explanatory and educational information and packing and installation instructions, should be included in an appendix.

PART II—Instructions for Writing VOLUNTARY PRODUCT STANDARDS

The following editorial guidelines are provided for use in preparing Voluntary Product Standards.

1. CONTENT

Voluntary Product Standards shall be written in a *clear, accurate,* and *brief* form. Superfluous explanatory material and unnecessarily complicated technical statements shall be avoided. The subject matter shall be kept within the scope of the several sections contained in a Voluntary Product Standard.

2. MANUSCRIPT PREPARATION

Voluntary Product Standard manuscripts shall be typed on one side of 8½ by 11 inch white bond paper. All typewritten copy shall be double-spaced, and there shall be at least a 1-inch margin on all sides.

3. STYLE

3.1. **General**—The *U. S. Government Printing Office Style Manual* shall be used as a guide to the rules of capitalization, spelling, punctuation, abbreviations, syllabication, and other matters of style which are not covered below. For information not included in the *Style Manual,* the *NBS Manual for Scientific and Technical Communications* and *Webster's New International Unabridged Dictionary* shall be used.

3.2. Abbreviations and symbols

3.2.1. **Abbreviations**—The use of abbreviations in the text of a Standard should be limited. If they must be used, the following rules shall apply (see 3.11.2 for abbreviations of plastics terminology):

(a) The use of abbreviations should be restricted to those in common usage and not subject to possible misunderstanding; however, if an abbreviation that is not well known to the anticipated audience for the Standard is used, it should be written out in full the first time, with the abbreviation following in parentheses.

(b) Abbreviations should be used in the text only when preceded by numerals; however,

(c) When a long word or phrase is used frequently, it may be replaced by an abbreviation that is explained when it first occurs; for example, *The pipe shall be made of polytetrafluoroethylene (PTFE) resin.* Commonly accepted abbreviations for names of government agencies, associations, and societies may be used if the name is spelled out the first time it is used; for example ASTM, ANSI, TAPPI, ASME (note: there are no periods between the letters).

(d) The use of abbreviations shall be consistent throughout the Standard; the same word shall not be abbreviated in one place in the text and spelled out in another, except as indicated in (a) and (c) above.

(e) Abbreviations may be used in tables, footnotes, parentheses, and figures to save space.

(f) Usually, terms which seldom occur should not be abbreviated.

(g) Use the singular form of an abbreviation to stand for all varients (single, plural, or participle) of the word abbreviated; for instance, use *10 in* not *10 ins.*

3.2.2. **Symbols**—In general, symbols should not be used in the text of the Standard. The use of (′) and (″) for feet and inches is not recommended. The percentage symbol (%) shall not be used in the text, but may be used in tables when space is limited. Any symbol formed by a single character should be avoided, since a printing error would destroy the intended meaning. Do not use *x* when expressing size such as *2 x 4 x 6*; instead, use the word *by,* e.g., *2 by 4 by 6 inches.*

3.3. **Appendixes**—If there are two or more appendixes, they shall be designated by alphabetical capital letters, e.g., appendix A, appendix B, appendix C. The paragraph numbering in an appendix shall begin with *1* and shall be preceded by a capital *A,* e.g., A1, A2, A2.1, A2.2, or, if there is more than one appendix, by the letter of the appendix. The footnotes for each appendix shall begin with the number *1.* Each appendix shall be titled.

3.4. **Capitalization**—Unless used with a complete title, the words *table, section, appendix,* and *figure* should not be capitalized; for example, *Figure 2, Scrub tester* (full title) but *The apparatus shall be as shown in figure 2*

(title not given). The word *standard* should be capitalized in a Voluntary Product Standard manuscript if it refers to that specific standard; for example, *The tests described in this Standard shall be performed using calibrated instruments* but *To determine tensile strength, use the standard test described in 4.3.*

3.5. **Definitions**—The necessity for a definition can be avoided in many cases if requirements are properly stated. However, in those cases where the proper interpretation of a Standard may be dependent upon agreement as to definitions of terms, such definitions of terms should be included.

3.6. **Dimensions and sizes**—If the customary units are those of the English system, metric units shall be shown parenthetically, if appropriate. Tolerances or limits shall be designated in decimals or fractions and may be accompanied by recognized gage number designations in parentheses. If tables or figures are included to list or show dimensions and tolerances, the text shall refer to them.

3.7. **Figures**—The word *figure* is used to identify illustrations and graphs. When possible, figures shall be placed in the body of the Standard immediately following the paragraph where they are first referenced. If space does not permit this, they shall be placed on a separate page following the page on which the first reference appears. Figures shall be used wherever they will describe items covered by the Standard more clearly and accurately than can be stated in the text. All figures shall be numbered consecutively with Arabic numerals in the order in which they are initially referenced in the Standard and shall be titled. All items shown in figures shall be clearly identified.

3.8. **Footnotes and other references**

3.8.1. **Footnotes**—Footnote references shall be used sparingly. Consecutive Arabic numerals, beginning with *1* shall be used for footnote references in the text of the Standard. Each table and appendix shall be footnoted separately. Lower case letters (a, b, c, etc.) shall be used instead of numbers in tables. Footnotes to the text shall be placed at the bottom of the page; footnotes to tables, below each table.

3.8.2. **Notes**—Notes shall be used to set explanatory material or suggestions apart from the text of the Standard.

For example, notes may be used:

(a) To clarify procedures or explain modifications in a test method;

(b) To give safety precautions concerning fire, explosion, toxicity, or other dangers to testing personnel or to mention special precautions to prevent damage to eqiupment;

(c) To describe additional (not alternative) apparatus, material, or procedures that are not actually required; or

(d) To indicate limitations of the application of a test if not covered in the text.

3.8.3. **References to other paragraphs within a Standard**—(See 3.10.3.)

3.9. **Numbers**—A figure is used for a number of 10 or more with the exception of the first word of a sentence. Numbers under 10 are to be spelled, except for those used to express time, measurement, money, or percentages; for example, *10 times as large, 15 specimens, 5 minutes, three cycles, 8 percent.* (See 3.10.4 for paragraph numbering.)

3.10. **Paragraph structure**

3.10.1. **Headings**—When a section is divided into paragraphs and subparagraphs, each paragraph and subparagraph shall be given a subject heading. Where there is only one paragraph in a section, that paragraph should not have a subject heading. Only the first letter of the first word in a paragraph heading shall be capitalized, unless the heading contains a proper noun. Similar paragraph headings in any one section shall be avoided.

3.10.2. **Underlining**—All of the requirements in the Standard are important; therefore, it is not necessary to underline or capitalize for the sake of emphasis.

3.10.3. **Cross-referencing**—When cross-references are made to other paragraphs or subparagraphs within the Standard, the reference shall be made to the number of the paragraph, e.g., *See 3.9* not *see paragraph 3.9* nor *par. 3.9.* Reference to paragraph numbers of another document shall be made in conjunction with its identification number and title.

3.10.4. **Paragraph numbering**—Each general statement and specific requirement shall be covered by a separate paragraph or subparagraph. Sections, paragraphs, and subparagraphs shall be numbered consecutively.

Example

Section	3.
First paragraph	3.1.
First subparagraph	3.1.1.
First sub-subparagraph	3.1.1.1.

In no case shall more than four numbers be used in subdividing the text. If a section contains only one paragraph, that paragraph shall

not be numbered. Listed material and procedural steps may be marked with lower case letters instead of numbers.

Example

The following test shall be performed:
a. Place sample in oven at 82.2 °C for 4 hours.
b. Remove sample and examine for cracks.
c. Repeat step (a).

3.11. Phrasing

3.11.1. Frequently used phrases—The following phrases should be used where appropriate. Requirements established by reference should be written thus: *The material shall meet the requirements of type I, grade 1 as described in . . .* or *. . . the material shall be as specified in. . . .* When reference is made to a requirement in the Standard that is not difficult to locate, the simple phrase . . . *as specified herein* should be used. The phrases . . . *to determine compliance with . . .* or *to determine conformance to . . .* should be used in place of the phrase . . . *to determine compliance to. . . .*

3.11.2. Use of the word shall—The emphatic form of the verb *shall* shall be used in stating requirements. For instance, in the requirements section a requirement shall be stated emphatically as follows: *The indicator shall be designed to indicate. . . .* In the test section, mandatory instructions shall be stated as follows: *The indicator shall be turned to zero and 220 volts alternating current applied.* In stating positive limitations, the phrasing shall be: *The diameter shall be not greater than. . . .* Use the words *will, should,* or *may,* only to express nonmandatory provisions. For specific test procedures, the imperative form, e.g., *Turn the indicator to zero and apply 220 volts alternating current,* may be used provided the entire method is preceded by *The following tests shall be performed* or related wording.

3.12. Plastics terminology and abbreviations

3.12.1. General—When referring to a plastic product or resin, use the official chemical name for the plastic not a trade name, e.g., use *nylon* not *zytel.* Remember to include copolymers, if any, and to put in all hyphens.

3.12.2. Abbreviations—The authority for abbreviations of plastics terminology is the American Society for Testing and Materials (ASTM) standard D 1600–69, *Standard Abbreviations of Terms Relating to Plastics.*[1] If an abbreviation is not given in ASTM D 1600–69, you may use an abbreviation that is accepted in the plastics trade. The following recommended abbreviations for commonly used plastics and resins are taken from ASTM D 1600–69 with the exception of PVF_2, which is not listed in the ASTM document but is an accepted abbreviation in the industry. The abbreviation FEP should stand for the chemical name given below rather than for the one given in ASTM D 1600–69.

Term	Abbreviation
Acrylonitrile-butadiene-styrene plastics	ABS
Epoxy, epoxide	EP
Melamine-formaldehyde	MF
Polybutadiene-styrene	PBS
Polyethylene	PE
Polypropylene	PP
Polytetrafluoroethylene	PTFE
Fluorinated ethylene-propylene	FEP
Poly (vinyl chloride)	PVC
Poly (vinyl fluoride)	PVF
Poly (vinylidene fluoride)	PVF_2
Urethane plastics	UP

3.13. Proprietary items—Trade names, copyrighted names, or proprietary names applying exclusively to the product of one manufacturer should not be used. If the use of such names is unavoidable, they shall be followed by *or equal,* and it should be stated in a footnote that the use of such names is solely for the purpose of description and that other articles equal in performance will be acceptable.

3.14. Punctuation

3.14.1. Commas—A comma is inserted after each member within a series of three or more words, phrases, letters, or figures used with *and, or,* or *nor;* for example,

Groups 1, 2, 3, and 4
Scratches, holes, and stains are not allowed by the bolt, by the yard, or in remnants.

A comma is not necessary between superior figures or letters in footnote references; for example,

Numerous instances may be cited [1 2]
Table 1. Pipe requirements [a b]

3.14.2. Hyphens—Hyphens shall be used in the following instances:

(a) Insert hyphens in adjective compounds with a numerical first element; for example,

10-inch space
5-inch-wide specimen
a 5-percent increase
1/2-inch pipe

but 6-1/8 inch rope (the hyphen joining the adjectives shall be omitted if the number element contains a hyphen).

(b) Use hyphens in numbers with fractions; for example,

[1] Copies of this ASTM publication may be obtained from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pa. 19103.

1-1/2 3-1/2 inch pipe
33-1/2 percent

(c) Each part of a multiple-part hyphenated word or unit modifier should be followed by a hyphen; for example,

V- or U-shaped 6-, 8-, and 12-inch pipe

3.14.3. Figures and tables—The title of a figure is followed by a period; however, there is no punctuation after the title of a table; for example,

Table 10. Accumulated height percent
Figure 5. Apparatus for pressure test.

3.14.4. Placement of punctuation with quotation marks—Commas and periods should be placed inside quotation marks. Punctuation other than commas and periods should be placed outside quotation marks unless part of the quoted matter; for example,

The tubing covered by this Standard is referred to as "general-purpose," "thick-walled," and "thin-walled"; however, it is also referred to as "Type A," "Type B," and "Type C."

3.15. References to other documents—References to nationally recognized and conveniently obtainable specifications, standards, publications, or drawings should be used when possible to avoid repeating the information in numerous documents. The Standard shall not conflict with the provisions of the referenced specifications unless special exceptions are clearly stipulated. Other documents shall be made a part of the Voluntary Product Standard by reference when the documents are designed specifically to provide the information required by the Standard. If the text of the Standard does not provide the name of the publisher of a referenced document and where it can be obtained, this information shall be given in a footnote. The same footnote should indicate whether later editions of the document may be used. The footnote for the initial reference should be similar to the following example:

Later issues of the ASTM (ANSI, Dept. of Commerce, or other standards-writing group) publications specified in this Voluntary Product Standard may be used providing the requirements are applicable and consistent with the issues designated. Copies of ASTM publications may be obtained from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pa. 19103.

Subsequent references to other standards published by the same agency (or organizations) should be individually footnoted with the footnote referring back to the initial footnote (e.g., [2] *See footnote 1, page 3*). When several standards published by the same organization appear on a single page, the same footnote number should be used for each reference. When the same document is referenced several times, it shall only be footnoted the first time it is mentioned.

3.16. Sizes—(See 3.6, *Dimensions and sizes*)

3.17. Spelling—The following words may be spelled or written correctly more than one way; they are given in the form preferred by NBS:

alinement	mold
antennas	percent
appendixes (plural)	pipet
disk	sulfur
fiber	ultraviolet
formulas (plural)	vacuum
gage	wavelength
infrared	x ray (noun)
kerosine	x-ray (adjective)

3.18. Standard designation—The following rules shall apply to the designation of specific Standards:

(a) The number of the Standard shall precede the title.

(b) The principal words in the Standard's title shall be capitalized.

(c) The title shall be underlined or typed in italics to distinguish it from the rest of the text.

(d) Standards' titles shall be complete; no words shall be left out. The titles of ASTM documents shall include the word *standard* or *tentative* at the beginning of the title.

(e) The first time a Standard is mentioned, the full number and title of the Standard shall be given. In subsequent references to that same Standard, only the name or acronym of the publishing organization and the Standard number shall be given.

Examples:
Voluntary Product Standard PS 9–66, *Fabrics for Bookcovers*, ASTM D 591–67, *Standard Method of Test for Starch in Paper*, (second mention: *ASTM D 591–67*).

3.19. Tables—Tables shall be used wherever such presentation will eliminate repetition or show relationships clearly. All tables shall be numbered consecutively with Arabic numerals in the order in which they are initially referenced in the Standard, and they shall be titled. A minimum of capital letters shall be used in tables. Capitalize only the first word in table titles, column headings, and column entries and all words that are normally capitalized (proper nouns). When possible, tables shall be placed in the body of the Standard immediately following the paragraph where they are first referenced. If space does not permit this, they shall be placed on a separate page following the page on which the first reference appears.

Example:

Table 5. Standard sands for flint

Grit size	Type of paper product	Standard sand	
		Mineral	Date
4/0	Flint finishing paper	Garnet	3/12/52
220	Flint pouncing paper	__do*__	Do.
220	Flint snuffing paper	__do___	Do.
3/0	Flint finishing paper	__do___	8/05/52

* The abbreviation *do.* stands for *ditto* or *the same.* It is capitalized only in the first and last columns of a table.

3.20. Temperature designation—References to temperature shall be written in the following forms:

20 ± 2 °C*
12.8 and 18.3 °C
30 to 580 °F
73.4 ± 3.6 °F (23 ± 2 °C)
167°, 284°, and 392 °F**
17 to 200 K***

* NBS style is to leave a space between the last number and the °C or °F.
** Notice that the degree marks come before the comma.
*** Temperatures on the Kelvin scale are written without degree marks.